

What is Claimed is:

1. A transparent polymeric composition having good impact strength, a high modulus, and good heat resistance, comprising:

- 5 - from 50% to 90% by weight of a thermoplastic matrix (I) with a refractive index n_1 ,
wherein said matrix (I) is a homopolymer or a copolymer comprising at least one monomer unit selected from the group consisting of styrene, acrylonitrile, acrylic acid, and short-chain alkyl (meth)acrylates;

- from 0 to 40% by weight of an impact additive (II) with a refractive index n_2 ; and

- 10 - from 10% to 50% by weight of a block copolymer (III) with a refractive index n_3 ;
the difference between the refractive indices, taken two by two, being less than or equal to 0.01.

2. The composition of claim 1, wherein the block copolymer III conforms to the following
15 general formula - Y-B-Y', in which

- B is an elastomer block which is thermodynamically incompatible with blocks Y and Y';

- Y and Y' can be the same or different; wherein if Y is a block composed predominantly of styrene, then Y' is not a block composed predominantly of styrene;

- 20 - at least one of the two blocks Y and Y' is totally or partially compatible with the thermoplastic matrix (I).

3. The composition of claim 2, wherein B comprises one or more monomer units selected from the group consisting of butadiene, isoprene, 2,3-dimethyl-1,3-butadiene, 1,3-pentadiene
25 and 2-phenyl-1,3-butadiene.

4. The composition of claim 3, wherein B comprises butadiene monomer units.

5. The composition of claim 3, wherein B comprises isoprene monomer units.

6. The composition of claim 2, wherein Y and Y' comprise at least one monomer unit selected from the group consisting of styrene and short-chain alkyl methacrylates.

7. The composition of claim 6, wherein Y is a block composed predominantly of styrene, and wherein Y' is a block composed predominantly of methyl methacrylate monomer units.

8. The composition of claim 6, wherein Y and Y' are blocks composed predominantly of methyl methacrylate monomer units.

9. The composition of claim 7, wherein Y' comprises at least 60% of syndiotactic polymethyl methacrylate.

10. The composition of claim 8, wherein Y and Y' each contain at least 60% of syndiotactic polymethyl methacrylate.

11. The composition of claim 1, wherein the amorphous matrix I comprises at least one monomer unit selected from the group consisting of styrene, acrylonitrile, acrylic acid, and short-chain alkyl (meth)acrylates.

12. The composition of claim 11, wherein I comprises a mixture composed of 0 to 55% by weight of styrene monomer units and from 45% to 100% by weight of methyl methacrylate monomer units.

13. The composition of claim 1, wherein the additive II is a core-shell copolymer comprising an elastomer core and a rigid shell which is compatible with the amorphous matrix I.

14. An article comprising the composition of claim 1, wherein said article is formed by a melt state conversion selected from the group consisting of injection molding, extrusion and calendaring.

15. The composition of claim 6, wherein Y and Y' comprise methyl methacrylate units.

16. The composition of claim 11, wherein the amorphous matrix I comprises methyl methacrylate monomer units.